

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro



(43) Internationales Veröffentlichungsdatum
21. Oktober 2004 (21.10.2004)

PCT

(10) Internationale Veröffentlichungsnummer
WO 2004/089716 A1

(51) Internationale Patentklassifikation⁷: B61F 5/22,
5/10, 5/12

(21) Internationales Aktenzeichen: PCT/EP2004/003733

(22) Internationales Anmeldedatum:
7. April 2004 (07.04.2004)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:
103 16 497.9 9. April 2003 (09.04.2003) DE

(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): BOMBARDIER TRANSPORTATION GMBH [DE/DE]; Saatwinkler Damm 43, 13627 Berlin (DE).

(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): SCHNEIDER, Richard [CH/CH]; Bollweg 5, CH-8240 Thayngen

(CH). MATHER, Geoff [GB/GB]; 27 Town Street, Duffield, Derby, DE56 4EH (GB). ZIMMERGREN, Patrik [SE/SE]; Nedre Langvinkelsgatan 61, S-25 234 Helsingborg (SE). SCOTHERN, Robert [GB/GB]; 66 Ferres Way, Allestree, Derby, DE22 2BB (GB).

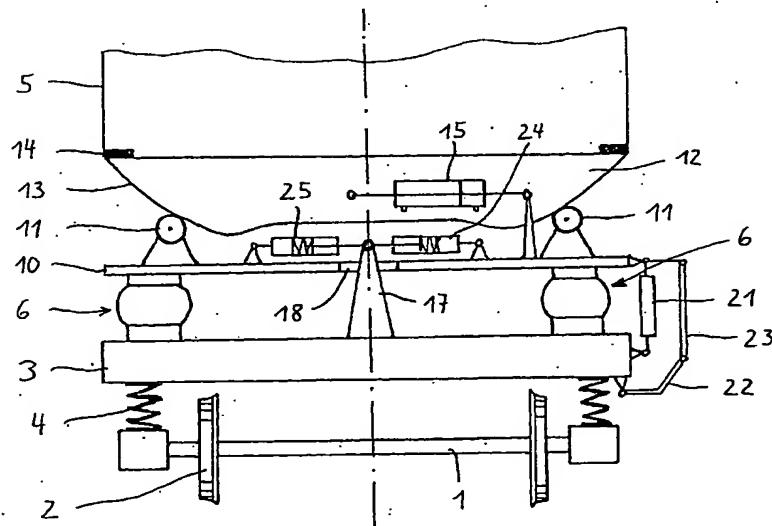
(74) Anwalt: MEYER, Hans-Joachim; Cohausz & Florack, Zusammenschluss Nr. 24, Bleichstrasse 14, 40211 Düsseldorf (DE).

(81) Bestimmungsstaaten (soweit nicht anders angegeben, für jede verfügbare nationale Schutzrechtsart): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Fortsetzung auf der nächsten Seite]

(54) Title: RUNNING GEAR FOR A RAILWAY VEHICLE PROVIDED WITH AN IMPROVED TRANSVERSAL SUSPENSION

(54) Bezeichnung: FAHRWERK FÜR EIN SCHIENENFAHRZEUG MIT VERBESSERTER QUERFEDERUNG



(57) Abstract: The invention relates to a running gear for a railway vehicle comprising at least one axle, a running gear frame (3) which is supported by said axle by means of an intermediate primary suspension (4), a secondary suspension for supporting a frame (5) on the running gear frame and a transversal suspension (24, 25). In a preferred embodiment, said secondary suspension is provided with pneumatic springs (6). In order to better control transversal and rolling motions with a low interaction, the transversal suspension (24, 25) and/or a transversal damping are arranged above the secondary suspension (6) and under the lower part of the frame (5).

[Fortsetzung auf der nächsten Seite]

WO 2004/089716 A1

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/003733

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B61F5/22 B61F5/10 B61F5/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 247 413 B1 (TEICHMANN MARTIN) 19 June 2001 (2001-06-19) the whole document	1-16, 18-24
X	US 3 877 389 A (DEAN ALBERT G) 15 April 1975 (1975-04-15)	1-6, 8-10,12, 19
Y	column 1, lines 43-60 column 2, line 67 - column 4, line 8; figure 3	7
X	US 3 782 294 A (SUNDBY G) 1 January 1974 (1974-01-01) column 3, lines 36-60 column 5, lines 33-56; figures 1,2,4	1-6,11, 12,19,20
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 July 2004	30/07/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer Fuchs, A

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/003733

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 1 232 121 A (MASCHINENFABRIK AUGSBURG-NURNBERG) 19 May 1971 (1971-05-19) figures 3-9	7

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2004/003733

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

see supplemental sheet PCT/ISA/210

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No. PCT/EP2004/003733
--

Continuation of II.2

Claims:

The embodiments according to figures 1 and 3 are inconsistent with the subject matter of claim 1 (in fig. 1 the cross spring 19 is below the secondary suspension and in fig. 3 the cross spring 27 is not below but within the base span of the coach body). The search was consequently limited to the subject of the claims taking into account the embodiment according to figure 2.

The applicant is advised that claims relating to inventions in respect of which no international search report has been established normally cannot be the subject of an international preliminary examination (PCT Rule 66.1(e)). In its capacity as International Preliminary Examining Authority the EPO generally will not carry out a preliminary examination for subjects that have not been searched. This also applies to cases where the claims were amended after receipt of the international search report (PCT Article 19) or where the applicant submits new claims in the course of the procedure under PCT Chapter II. After entry into the regional phase before the EPO, however, an additional search can be carried out in the course of the examination (cf. EPO Guidelines, Part C, VI, 8.5) if the deficiencies that led to the declaration under PCT Article 17(2) have been remedied.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/003733

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 6247413	B1 19-06-2001	AT	405166 B	25-06-1999
		AT	222996 A	15-10-1998
		WO	9826970 A1	25-06-1998
		AT	194947 T	15-08-2000
		AU	722532 B2	03-08-2000
		AU	5184698 A	15-07-1998
		CA	2274118 A1	25-06-1998
		CN	1240397 A , B	05-01-2000
		DE	59702092 D1	31-08-2000
		EP	0944513 A1	29-09-1999
		ES	2151747 T3	01-01-2001
		HK	1023970 A1	05-09-2003
		HR	970695 A1	30-06-1998
		HU	0001085 A2	28-08-2000
		JP	2001506202 T	15-05-2001
		KR	2000057630 A	25-09-2000
		NO	992439 A	12-08-1999
		PL	334340 A1	28-02-2000
		RU	2203818 C2	10-05-2003
		SK	79499 A3	18-01-2000
		TW	480227 B	21-03-2002
US 3877389	A 15-04-1975	NONE		
US 3782294	A 01-01-1974	NONE		
GB 1232121	A 19-05-1971	DE	1605102 A1	03-12-1970
		AT	288480 B	10-03-1971
		BE	718362 A	31-12-1968
		CH	478012 A	15-09-1969
		DE	6606697 U	26-11-1970
		ES	356206 A1	01-01-1970
		FR	1576687 A	01-08-1969
		NL	6809864 A	24-01-1969